CLAIMS AMENDMENTS

Claim 1 (currently amended) For a vertical flow cryogenic liquid turbine generator having main product-lubricated bearings separated by a span of shaft and a thrust equalizing mechanism adjacent one of said main bearings, the lubricated bearings having bearing blocks, the thrust mechanism comprising a thrust plate, variable orifice and fluid chamber, the fluid chamber fluidically coupled to the variable orifice, an improvement comprising a stationary spacer composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the generator interposed between the thrust plate of the thrust equalizing mechanism and the bearing blocks of its adjacent main bearing to reduce the span between said main bearings, the height of the spacer selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid turbine generator.

Claim 2 (canceled)

Claim 3 (canceled)

Claim 4 (canceled)

Claim 5 (currently amended) For a vertical flow cryogenic liquid turbine generator having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings and a variable orifice defined between the thrust plate and a throttle plate affixed to the shaft, an improvement comprising a stationary length compensator interposed between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the ~~spacer~~ stationary length compensator is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the generator, the height of the length compensator selected such

that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid turbine generator.

Claim 6 (canceled)

Claim 7 (canceled)

Claim 8 (canceled)

Claim 9 (currently amended) For a vertical flow cryogenic liquid turbine generator having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings, an improvement comprising stationary means interposed between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the ~~spacer~~ stationary means is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the generator, the height of the stationary means selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid turbine generator.

Claim 10 (canceled)

Claim 11 (canceled)

Claim 12 (canceled)

Claim 13 (currently amended) For a vertical flow cryogenic liquid pump having main product-lubricated bearings separated by a span of shaft and a thrust equalizing mechanism adjacent one of said main bearings, an improvement comprising a stationary spacer interposed between the thrust equalizing mechanism and its adjacent main bearing to reduce the span between said main bearings, wherein the spacer is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the pump, the height of the stationary spacer selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid pump.

Claim 14 (canceled)

Claim 15 (currently amended) For a vertical flow cryogenic liquid pump having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings and a variable orifice defined between the thrust plate and a throttle plate affixed to the shaft, an improvement comprising a stationary length compensator interposed between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the ~~spacer~~ stationary length compensator is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the pump, the height of the stationary length compensator selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid pump.

Claim 16 (canceled)

Claim 17 (currently amended) For a vertical flow cryogenic liquid pump having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings, an improvement comprising stationary means

interposed between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the ~~spacer~~ stationary means is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the pump, the height of the stationary means selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid pump.

Claim 18 (canceled)

Claim 19 (new) A method for generating electrical energy using a vertical flow cryogenic liquid turbine generator having main product-lubricated bearings separated by a span of shaft and a thrust equalizing mechanism adjacent one of said main bearings, the lubricated bearings having bearing blocks, the thrust mechanism comprising a thrust plate, variable orifice and fluid chamber, the fluid chamber fluidically coupled to the variable orifice, the method further comprising the step of interposing a stationary spacer composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the generator between the thrust plate of the thrust equalizing mechanism and the bearing blocks of its adjacent main bearing to reduce the span between said main bearings, the height of the stationary spacer selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid turbine generator.

Claim 20 (new) A method for generating electrical energy using a vertical flow cryogenic liquid turbine generator having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings and a variable orifice defined between the thrust plate and a throttle plate affixed to the shaft, the method further comprising the step of interposing a stationary length compensator between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span

between said main bearings, wherein the stationary length compensator is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the generator, the height of the stationary length compensator selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid turbine generator.

Claim 21 (new) A method for generating electrical energy using a vertical flow cryogenic liquid turbine generator having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings, the method further comprising the step of interposing stationary means between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the stationary means is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the generator, the height of the stationary means selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid turbine generator.

Claim 22 (new) A method for transporting cryogenic fluid using a vertical flow cryogenic liquid pump having main product-lubricated bearings separated by a span of shaft and a thrust equalizing mechanism adjacent one of said main bearings, the method further comprising the step of interposing a stationary spacer between the thrust equalizing mechanism and its adjacent main bearing to reduce the span between said main bearings, wherein the spacer is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the pump, the height of the stationary spacer selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid pump.

Claim 23 (new) A method for transporting cryogenic fluid using a vertical flow cryogenic

liquid pump having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings and a variable orifice defined between the thrust plate and a throttle plate affixed to the shaft, the method further comprising the step of interposing a stationary length compensator between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the stationary length compensator is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the pump, the height of the stationary length compensator selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid pump.

Claim 24 (new) A method for transporting cryogenic fluid using a vertical flow cryogenic liquid pump having product-lubricated main bearings separated by a span of shaft and a thrust equalizing mechanism which includes a stationary thrust plate adjacent one of the main bearings, the method further comprising the step of interposing stationary means between the thrust plate and its adjacent main bearing to space said adjacent main bearing from the thrust plate in order to reduce the span between said main bearings, wherein the stationary means is composed of material having less than 1% of thermal linear contraction and that shrinks less than the shaft of the pump, the height of the length compensator selected such that it is operative between 70 K and 140 K, the operating temperature range of the cryogenic liquid pump.

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